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What does shared decision making ask from doctors? Uncovering suppressed qualities that could improve person-centered care

Arwen H. Pieterse [a,*], Pål Gulbrandsen [b,c], Eirik H. Ofstad [d], Julia Menichetti [c]

[a] Department of Biomedical Data Sciences, Leiden University Medical Center, 2333 ZA Leiden, the Netherlands
[b] Institute of Clinical Medicine, University of Oslo, 0316 Oslo, Norway
[c] Health Services Research Unit (HØKH), Akershus University Hospital, 1478 Lørenskog, Norway
[d] The Medical Clinic, Nordland Hospital Trust, 8005 Bodø, Norway

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ABSTRACT

Objective: Shared decision making (SDM) is infrequently seen in clinical practice despite four decades of efforts. We propose a need to explore what SDM asks from doctors in terms of enabling competencies and necessary, underlying qualities, and how these can be nurtured or suppressed in medical training.
Discussion: Key SDM tasks call for doctors to understand communication and decision mechanisms to carry them out well, including reflecting on what they know and do not know, considering what to say and how, and listening unprejudiced to patients. Different doctor qualities can support accomplishing these tasks; humility, flexibility, honesty, fairness, self-regulation, curiosity, compassion, judgment, creativity, and courage, all relevant to deliberation and decision making. Patient deference to doctors, lack of supervised training opportunities with professional feedback, and high demands in the work environment may all inflate the risk of only superficially involving patients.
Conclusions: We have identified ten professional qualities and related competencies required for SDM, with each to be selected based on the specific situation. The competencies and qualities need to be preserved and nurtured during doctor identity building, to bridge the gap between knowledge, technical skills, and authentic efforts to achieve SDM.

1. Introduction

[Chronic] patients present for assistance not as a collection of organ systems, one or more of which may be dysfunctional requiring scientifically indicated technical and pharmacological interventions, but rather as integral human beings with narratives, values, preferences, psychology and emotionality, cultural situation, spiritual and existential concerns, possible difficulties with sexual, relational, social and work functioning, possible alcohol and substance abuses and addictions, worries, anxieties, fears, hopes and ambitions - and more [1] *(p. 2).*

Shared decision making (SDM) is a model of clinical decision making that aims to involve patients in decisions about their care, and is often described as a communication technique. Patient and medical professional organizations, governmental bodies, and legislation increasingly support SDM [2–5]. Also, SDM is increasingly often a subject in medical curricula [6] and continuing medical education [7]. Many tools have further been developed to support SDM, including patient decision and conversation aids [8,9], question prompt lists [10], and decision coaching [11,12]. Research on SDM has grown exponentially over the past decade, also showing how it may reduce burnout among doctors [13]. Note that it should not be deemed as a "one size fits all" solution: even if for many decision situations SDM is appropriate or even indicated, for some it can be inappropriate or even harmful [14,15]. SDM is still not routine practice, despite its obvious ethical roots and empowering effects [16–19]. Barriers and facilitators to SDM have been identified at system, interactional, and individual levels [17,20,21].

In this paper, we will propose what may make the routine uptake of SDM difficult, taking one step further than the barriers that are commonly reported, such as doctor training, time, or patient health literacy [19]. Key to understanding the low prevalence of SDM in clinical practice may require an understanding of barriers and facilitators at a deeper level. As a starting point, we will use the commonalities identified between definitions of SDM [22]. Then, we aim to explore the following question: What does SDM "ask" from doctors and patients,

* Corresponding author.
E-mail address: a.h.pieterse@lumc.nl (A.H. Pieterse).

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given what the process entails? We will seek answers at the level of enabling competencies, and at a deeper level of essential and underlying 'qualities'. Moreover, we will consider conditions that may foster or hinder doctor efforts to involve their patients in decision making, or patients to become involved, and achieve person-centered care.

2. Enabling competencies that shared decision making tasks require

SDM definitions usually describe SDM processes in terms of behaviors, tasks, and/or responsibilities that doctors should display and accomplish, and to succeed would also require patients to participate actively. In a 2019 review, the following seven key components were present in more than half of 40 SDM definitions: *Create choice awareness*, *Describe treatment options*, *Tailor information*, *Learn about the patient*, *Patient preferences*, *Deliberate*, and *Make the decision* [23]. These all relate to tasks that may be taught and trained. Measures of SDM, not surprisingly, also largely reduce SDM to technical or behavioral skills, leaving aside aspects conveying humanistic communication [24]. As straightforward as the identified tasks may seem, their enactment in practice entails more than simply the application of particular behaviors. It requires true partnership with patients [25]. This view is shared by some of doctors' professional development frameworks, like the Canadian CanMEDS [26]. However, if a framework like CanMEDS focuses on roles (e.g., collaborator, leader) and related abilities (e.g., situational awareness, time management) required to meet overall patient needs, we will focus here on the mindset (the internal qualities and concrete competencies) needed specifically for decision talks with patients. Let us illustrate our argument for each of the key components, or tasks, of SDM.

2.1. Creating choice awareness

This task presumes deliberately and explicitly acknowledging uncertainty about the most appropriate next step. This is one of the enabling competencies that especially features the doctor's roles of medical expert and scholar [26]. It requires questioning one's assumptions about the better option, and willingness to allow more possibilities to remain open [27]. Moreover, knowing that one does not know, not yet, not fully or not at all, is a pervasive state in medical practice [28]. It is a burden that doctors can be trained to bear [29,30] and may be part of their calling as a doctor. Still, it may often induce negative psychological effects, such as feelings of stress, vulnerability, and self-blame [31], and be a source of fear or apprehension towards their patients [32]. Indeed, most patients seek safety, security and certainty when faced with a possible existential threat [33]. Evidence on the effect of tolerance of uncertainty is limited [34], but suggests that it may affect what information doctors provide about test results [35], what options they recommend [35,36], and their propensity to decide what is better for their patients [36]. All these influences challenge the very first step in an SDM process. Patients on the other hand, need to understand *why* they should provide their views and opinions, and need to be willing to contribute their perspective [37–39]. Both of these circumstances may not necessarily be readily met [40].

2.2. Describe treatment options and Tailor information to individual patients

During these tasks, doctors, first, need to have the scholarly abilities to identify and evaluate pertinent evidence, integrate it into practice, and translate it to individual patients [26]. Prognostic information can be a crucial piece in decisions [41], yet, it is insufficiently taught and managed [42]. Understanding probabilistic information can be challenging, as is estimating probabilities based on the integration of prior likelihoods and new (diagnostic) pieces of information. Furthermore, predicting future events is bound to be uncertain and doctors' tolerance for uncertainty can affect discussion practices [43]. In the process of teaching patients, doctors need to know about and be aware of effective communication strategies, including using plain language, providing well-curated information, and assessing patient comprehension. Doctors however overestimate the effectiveness of their communication [44–46]. Patients often do not correctly understand their diagnosis, prognosis, or treatment options [e.g., 47,48]. Moreover, how doctors present and frame information may steer patients towards particular options in different ways [49–51]. They may present only a subset of available options, or provide more arguments for some. They may do this based on their intuitive assessments of patients' disposition or of how appropriate options are [52]. Steering may take more subtle forms too, when doctors use communication that consciously or unconsciously drives patients towards the option they think is in their patients' better interest [53,54]. The power of framing effects in affecting treatment choice has been explored for probabilities of outcomes, although evidence is still limited [55,56]. Fundamentally, doctors, and patients, need to be conscious of the risk of falling prey to cognitive biases. Common biases include those such as availability bias, leading doctors to overestimate the probability of adverse outcomes, or action bias, resulting in recommending or accepting intervention when watchful waiting or supportive care may be better suited [57]. Moreover, patients may find it difficult to hear or accept information about options. It can be confrontational to learn for example that none of the available options will cure their condition, that undergoing treatment may result in long-lasting and/or serious side-effects, or that only palliative treatment is possible. In case patients react emotionally to the information they receive, this may be challenging for doctors. Doctors may not attend to patients' emotions because they do not know how to, or find this confronting [e.g., 58]. Emotions may additionally (temporarily) limit patients' understanding of information [59]. They may focus on just one piece of information, and neglect relevant information [60,61].

2.3. Learn about the patient and patient preferences

In general, and especially when there is no best option based on the medical evidence, it is critical to *learn about the patient*, including patients' willingness to partake in the decision-making process. Not all patients want to participate in decision-making, yet this may point towards feelings of inability rather than unwillingness [40]. Commonly, patients find it relevant that their preferences are taken into account [e.g., 62]. Doctors will need to *elicit patients' preferences* and deliberate with them, but doctors rarely elicit information relating to the patient's personal values, context, or preferences [40,63]. Patients, on the other hand, can find it hard to see merit in contributing such personal data [20]. This may be because they are not used to do it, do not see the worth, or do not want to. Moreover, doctors may find it difficult to engage patients in sharing personal information without creating relational misunderstandings, or unduly burdening patients. For patients, it can be challenging to bring forward questions and concerns [64], and to become clear on their preferences and most valued goals [65]. To consider all relevant information is expected to require time and, when done deliberately, cognitive effort. It may also be emotionally demanding [66]. When patients express preferences, doctors may need to investigate patients' rationale for them to judge how well-informed the preferences are. This judgment is mostly to make sure patients understood the relevant information and to remove potential decision-making bias [67]. When a patient's preferences go against the doctor's, the doctor's ability to be open to disagreement may help them to feel comfortable to accept it. Importantly, throughout the deliberation process, doctors need to take patients seriously. Although self-evident, this might not happen if a doctor judges a patient's mental capacity to oversee their situation to be limited. Patients may then easily not feel listened to [68,69]. Doctors may also question or dismiss the validity of a patient's story if they find it unusual and difficult to interpret [70]. Dismissing may also happen to some extent where the fine line between convincing argumentation and persuasion is exceeded [50]. That is,

doctors may formulate the patient's position in ways that in fact delegitimizes it, and puts indirectly forward the doctor's opposing views. Patients may accept these reformulations either implicitly or explicitly. If they do, their original views will be turned into views that are more congruent with the doctor's. This will then potentially inform a decision that does not truly incorporate what the patient actually shared.

2.4. Deliberate and make the decision

In the final phase of the process, actually fostering patient autonomy requires doctors to have genuinely listened to their patients. This will enable them to incorporate the patient's goals of care as best as possible. It will also help make sure that patients feel comfortable even choosing against the doctor's recommendation, without threatening the relationship [71]. The better doctors are able to explain how they took into account what they have learned about the patient so far, the more we expect patients to see value in, and to be willing to, share their views. Patients will instead keep personal information to themselves if doctors base their recommendations on medical factors [72], do not incorporate patients' values explicitly [73], or provide recommendations unconnected with patients' personal views [72,74,75].

To summarize, the key tasks in SDM processes may seem technically simple, but call for doctors to know about and understand communication and decision mechanisms to carry them out well. Doctors need to reflect on what they know and do not know, on their preconceptions, and their natural preferences. They need to consider what to say, and how. Further, they need to listen unprejudiced to their patients, each time again, and to formulate recommendations that fit with their patient's story.

3. Underlying qualities essential to shared decision making

SDM tasks are like the leaves and branches of a tree, visible for all to see and measure. Supporting them are enabling competencies, like essential transferable-skills. At the core of these competencies, giving them meaning and direction, are intrinsic professional qualities, like the roots of a tree, hidden underground [76]. Already in 1991, researchers were arguing that we know almost nothing about the personal qualities of doctors that influence clinical encounters [77]. These personal qualities or character strengths, although stable, are malleable and constantly shaped, influenced and formed by experiences and contexts [78]. In the case of SDM, it is especially hard to imagine the required tasks in meaningful action, without a sense of the underlying qualities. We can imagine for example doctors doing the task of "creating choice awareness" in a technically correct way, but without the underlying qualities of flexibility, courage and humility, this task in action may not realize its deep, intended function. With this section, we will point to doctor qualities that could particularly nurture the enactment of the SDM tasks and the realization of the enabling competencies described above. We will further touch upon what qualities patients need to meaningfully participate in decision processes.

3.1. Create choice awareness

As explained in the previous section, this task presumes, among many, the competency of tolerating uncertainty. To fully transcend the uncertainty required by SDM, doctors (and patients as well) need the *humility* to intentionally accept it, the *flexibility* to move across varied psychological responses and perspectives, and the *courage* to jump into the unknown [31]. Humility is a doctor's professional value mentioned in professional development programs [26], and considered as fundamental [79,80]. However, it is not easy to come by, especially in SDM [81]. Indeed, many patients want to feel that their doctor is in control of their health condition and can make the right choices for them. In these cases, being humble and admitting uncertainty may especially feel like a breach in the obligation to provide care, and generate anxiety. Doctor's humility may need patients to be courageous and take some responsibility for action. It may also need cognitive flexibility from both sides. Cognitive flexibility—that is, being able to hold multiple views or to change or reframe a thought, situation, or perspective [82] —is a neurologically-based, trainable quality associated with indicators of psychological health [83]. From the doctor's side, it may help to try and put themselves in the patients' shoes and forecast possibilities and reactions. From the patient's side, it may help seeing the doctor's stance of not having a straightforward direction, and/or embracing the eventually unexpected scenario of a decision to make.

3.2. Describe treatment options and tailor information

The SDM task of describing treatment options requires a strength of intellectual *honesty*, with fairness and integrity, to embrace a fair presentation of possible options [84]. The specific awareness of the role played by framing effects and cognitive biases in influencing choices when "describing treatment options", rests also on qualities that imply *self-regulation* and interactional monitoring. That is, to see how the way adopted to formulate a message can potentially shape – and is concretely shaping – the perception of the other person, such as the patient. These self-regulatory and monitoring qualities may clearly show when doctors check patient understanding, when they sense that patients are not following as expected. The same qualities are as well crucial to tailor information based on on-going replies and reactions from the patient. Every utterance is then fine-tuned with the meanings constructed so far, in a purposeful dialogic process [85]. In the process of providing information about possible options, the courage of patients in speaking up when they do not understand, can particularly help doctors in articulating options and tailoring information as best as possible. Patient's curiosity to understand and learn about medical care, can activate them to ask questions about the information they receive from the doctor. This will foster their engagement in a "shared" information process, and help them to listen, understand and remember information about treatment options.

3.3. Learn about the patient and patient preferences

When moving towards SDM tasks that clearly reorient to the individual patient, the role of doctors' *curiosity* stands out. How can a doctor "learn about the patient" or explore "patient preferences" without being curious about that specific person and his/her life? At the very least, what patients value and consider important in living their lives, is essential to what care fits that life better. Without doctors' curiosity for that stance, it appears difficult to even start the process. Curiosity, generally defined as the desire for knowledge that sparks exploratory behavior, represents one of the most fundamental and pervasive aspects of humanity [86]. In medicine, it is mentioned as a universal antidote to a disease-centered practice. It is an antidote to the natural tendency and expectation to cure by doing/acting rather than to care by wondering/asking about the specific situation of that person [87]. Medical educators clearly recognize curiosity as a desirable quality [88–90]. It is also cited among attributes of professionalism in the Accreditation Council for Graduate Medical Education [91]. However, we know little about the critical pathways that lead doctors to acquire, demonstrate, and nourish/maintain curiosity. Engaging with a doctor who is curious about a patient, may also require a certain openness from the patient to share information about their lives. When exploring and entering into the patient world, curiosity may need to be paired with the humanitarian quality of *compassion* [92]. With this quality, doctors' emotional caring for the patient ensures that patients do not feel alone or threatened by explorative questions.

3.4. Deliberate and make the decision

The deliberation stage of SDM is when preference-based, informed

decisions take shape. Many more or less aligned scenarios are possible at this stage. Overall, the intellectual quality of *judgment* appears crucial to both doctors and patients to exercise critical rather than faulty thinking, weighing the evidence fairly, and examining the evidence, including patients' preferences, from all sides rather than jumping to conclusions. Doctors further need *prudence* in proposing a choice, and the *flexibility* and open-mindedness to think things through, weigh all possibilities fairly, and eventually being able to change their mind. Therefore, to delegate to some degree of control and make patient preferences emerge, judgment necessitates a good dose of *humility* and respect to not regard doctors' own preferences as more valuable [76]. Some *creativity* may be needed, to find the most suitable decision in cases of conflict between doctor and patient preferences about treatment options. Some further *curiosity* from doctors may also be required, in cases when the choice does not emerge as self-evident and patients struggle to clarify what matters most to them. Finally, the *courage* to do the right and speak the truth, especially when doctors (and patients) decide to go against usual practice and/or need to face some internal or external opposition. Courage has indeed been seen as "a matter of the heart", an "inner strength" that helps doing what is right without letting anxieties and fears take all the place [93].

To summarize, different doctor qualities can support in different ways and to different extents accomplishing the tasks of SDM (and, potentially, other). If doctor interpersonal qualities related to exploration and relationship-building may be particularly crucial in the starting phases, intellectual qualities necessary for judgment and decision making may be decisive in the decisional phases.

4. What may hinder the nurturing of inherent competencies and qualities?

So far, we have described how certain personal competencies and qualities in doctors and patients can enable SDM tasks and, more in general, high-quality person-centered care. SDM in itself is a process requiring more than 'just' providing good information and eliciting patients' preferences, as definitions show [22]. We propose that for SDM processes to unfold, it further requires competencies and underlying qualities from doctors, character strengths such as courage, humility, and flexibility – and ability to avoid making assumptions, handle fear of losing control or a desire to hide incomprehension. We now wish to point to doctor-, patient- and work-related factors that can nurture or hinder these competencies and qualities, and thereby provide some possible reasons for the slow implementation of SDM.

4.1. The doctors

There may be different external and internal reasons for someone to decide to start medical school and become a doctor [94–97]. Therefore, individuals with different personalities, competencies, strengths, and values may decide to study medicine. Some of the qualities we mentioned, like empathy, a sub-aspect of compassion, have recently been proposed as part of the screening criteria for admission to medicine [98]. Indeed, there is a general movement towards including non-academic, personal qualities into selection criteria for medical school [99]. We do not suggest that students should be assessed for all the qualities mentioned when entering medical school. What we do suggest is that these qualities must, and can, be developed as integral parts of a doctor identity-building process during the medical curriculum. What we see in fact is a possible *decline* in some of the qualities during medical education [100]. Furthermore, some students may already hold some or many of these qualities, while others may not. We envision the creation of a culture in medical schools and beyond where professional competencies and qualities are integrated and nurtured, and where students and doctors can receive continuous opportunities for preserving and stimulating these qualities. We question to which extent this is a focus of medical curricula worldwide [101,102]. Regarding uncertainty for example, reliance on multiple-choice questions with correct answers at early stages of medical training, suggests that there are single best answers in clinical care. This certainty does not fit with actual clinical practice. Unintentionally, medical students are taught that not knowing that best answer is a mark of incompetence [103]. To counteract such possible feelings of inability, peers and senior colleagues should make clear that uncertainty is expected and part of clinical practice. By being explicit about it and asking for and offering help, a culture can be built that accepts and even embraces uncertainty [103]. Further, while fortunately communication skills training is now commonplace at least in Western medical schools, it is mostly being taught as a prescription of how to manage communication tasks, often ignoring basic teaching about human interaction in general [104] and lacking a connection between the skills taught and person-centered theory [105]. Postgraduate specialist training is for the most part void of focus on communication: while all technical skills are regularly trained under supervision, doctors are rarely observed in clinical encounters and given feedback on how they communicate. In fact, even the basic educational communication skill on how to supervise and give feedback in a constructive way is not something most doctors were taught. So it is more or less a matter of luck when a young doctor learns valuable professional qualities from the relationship with superiors. The hidden curriculum plays a huge role in nurturing or hindering medical professionalism [106]. Pedagogy is not part of the medical culture, and it is hard to implement because of the work environment.

4.2. The work environment

The demand for healthcare is insatiable, even in affluent countries. In fact, the inverse care law explains how people seemingly need or at least want more care the better off they are [107]. As a consequence doctors' work load is high, which makes it hard to accommodate sufficient supervision. Furthermore, with the increasing amount of information available to the public – and rights legislated – expectations of being sufficiently informed and treated correctly rise. With the rapidly changing knowledge base of medicine, this imposes a fear of not being up to standards among doctors, leading to adverse reactions like providing too much oral information or too much documentation in the record to avoid litigation. Both are very inefficient practices. At the same time, with medical information being widely available on the Internet, doctors should be encouraged to search for relevant options and evidence. This is part of the process of continuous learning, and to make sure they know the best treatment options available. However, the overload of electronic information may complicate the task, and this happens also during the medical visit where the amount of recorded information makes it not always easy to find what is relevant. This is one reason for the frequent observations of doctors watching the computer while talking to patients. Moreover, modern medicine is complex and highly specialized. Sub-specialization leads to fragmented healthcare that makes effective teamwork and open communication difficult. Both have been shown to lead to less diagnostic errors and foster better outcomes [108]. Sub-specialization can result in the treatment of individual patients being parceled and factory-like. The work environment hence tends to separate doctors from time with patients [109]. Time pressure itself is often reported as a barrier to SDM [21,40,110]. At this point, there is little evidence showing that consultations last longer if patients were more involved in decision making, although it does require a time investment from doctors at the beginning to acquire the necessary skills [111]. Also, *actual* time may be limited while *perceived* time may be longer. That is, doctors may buffer untoward effects of time pressure for patients, such as by making patients feel as if the patient is at the center of the doctor's attention, right then and there [112].

4.3. The patients

Doctors are educated people, quite often also offspring in families in

which education has been highly valued. Also, members of these families more often than not are used to being in a position to have a say in how to manage their lives. Although a *should be* condition in humanity, this is not the reality of large groups in society. If you are not used to being asked for your opinion or being allowed to choose simple things like when to have a lunch break at work, to make decisions is a scary task. The deference for doctors builds partly on what doctors know and what they can do, partly on a general trust in their benevolent intention. When ill, many people feel vulnerable and often prefer to trust what the doctor decides to do because they are in dire need. The societal parallel can be observed in difficult times: when economy drops and more and more people suffer from unemployment or lack of basic commodities like food, housing, and safety, they seek charismatic and seemingly benevolent leaders who promise that they have solutions. And then, democracy is at risk.

To summarize, doctors are at risk of only superficially involving patients in decisions. This may be the consequence of patient deference to doctors. Doctors may further lack enough opportunities during medical training to develop/maintain and incorporate the qualities described as part of their professional identity. The scant attention paid to high-quality communication training may further not prepare doctors enough for SDM conversations. These conversations are further hampered by the task of staying up-to-date scientifically and gathering and digesting the clinical information available while attending to busy schedules.

5. Conclusion

We have explored possible reasons for the slow uptake of SDM in healthcare settings. We propose that the reason is a misconception that SDM is a rather simple process that doctors can do, provided some skills training. It is not. We have found a broad spectrum of observations and arguments to support that SDM is actually a very complex task that requires a range of competencies and underlying qualities in doctors, and to some extent also in patients. We are aware that what we are proposing as required for accomplishing SDM may seem daunting to achieve, and that to effectively engage in SDM may ask a lot from doctors. However, even if SDM can involve a variety of competencies and qualities, their enactment can be quite simple. As Street proposes, SDM is both complex and simple [113]. First, these qualities are to different extents present in each of us, and are nurtured by experiences and interactions from childhood and adolescence to medical school. Many medical students and future doctors, therefore, already hold many of these qualities, either naturally or through learning. Moreover, the relevance of many of these competencies and qualities will vary situationally, and the key point is actually identifying and applying what is needed for each situation. Wise doctors will need and learn to recognize which of these qualities fostering SDM are required in each situation. Finally, SDM will possibly be easier in the future when patients will be more and more sensitized to engage and actively participate.

However, since medicine is strongly influenced by the natural sciences, the immense amount of knowledge needed to become a doctor leads for many to cognitive overload which may suppress those qualities. We propose that medical students and doctors may need to receive continuous opportunities to nurture them. We therefore propose that qualities such as humility, flexibility, honesty, fairness, self-regulation, curiosity, compassion, judgment, creativity, and courage must be nurtured throughout medical training from novice students to experienced specialists, as the fundament to the essential transferable-skills, or competencies, to perform the tasks of SDM. Nurturing these qualities can only be achieved by regular reflection work among colleagues as part of the forming of a professional identity. We propose that continuing attention to professional qualities is necessary to bridge the gaps between knowledge, technical skills, and doctors as living beings. This has the potential to help doctors as well as patients to reach better mutual understanding and meaning creation. It may increase job satisfaction and protect doctors against burnout, while concurrently empowering patients. We see this as a *culture-building* task that will require system-level changes, bottom up by education and training, and top-down by rewarding healthcare environments in which patients and doctors feel safe and feel they belong.

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Arwen Pieterse: Conceptualization, Writing – original draft, Writing – review & editing. **Pål Gulbrandsen:** Conceptualization, Writing – original draft, Writing – review & editing. **Eirik Ofstad:** Writing – review & editing. **Julia Menichetti:** Conceptualization, Writing – original draft, Writing – review & editing.

Declaration of Competing Interest

None.

References

[1] Miles A, Asbridge JE. The chronic illness problem. the person-centered solution. Eur J Pers Cent Healthc 2016;4:2.
[2] Bravo P, Härter M, McCaffery K, Giguere A, Hahlweg P, Elwyn G. Editorial: 20 years after the start of international shared decision-making activities: is it time to celebrate. Probably Z Evid Fortbild Qual Gesund 2022;171:1–4.
[3] Danner M, Geiger F, Wehkamp K, Rueffer JU, Kuch C, Sundmacher L, et al. Making shared decision-making (SDM) a reality: protocol of a large-scale long-term SDM implementation programme at a Northern German University Hospital. BMJ Open 2020;10:e037575.
[4] Légaré F, Härter M, Stiggelbout AM, Thomson R, Stacey D. Choosing treatments and the role of shared decision-making. In: Nolte E, Merkur S, Anell A, editors. Achieving Person-Centred Health Systems. 1st ed.,. Cambridge University Press; 2020. p. 283–316.
[5] (NICE) NIfHaCE. Shared decision making: NICE guideline (2021) [updated June 17, 2021. Available from: ⟨www.nice.org.uk/guidance/ng197⟩.
[6] Noble LM, Scott-Smith W, O'Neill B, Salisbury H. Education UKCoCCiUM. consensus statement on an updated core communication curriculum for UK undergraduate medical education. Patient Educ Couns 2018;101:1712–9.
[7] Légaré F, Adekpedjou R, Stacey D, Turcotte S, Kryworuchko J, Graham ID, et al. Interventions for increasing the use of shared decision making by healthcare professionals. Cochrane Database Syst Rev 2018;7:CD006732.
[8] Stacey D, Légaré F, Lewis K, Barry MJ, Bennett CL, Eden KB, et al. Decision aids for people facing health treatment or screening decisions. Cochrane Database Syst Rev 2017;4:CD001431.
[9] Davis JL, Davison SN. Hard choices better outcomes: a review of shared decision-making and patient decision aids around dialysis initiation and conservative kidney management. Curr Opin Nephrol Hypertens 2017;26:205–13.
[10] Brandes K, Linn AJ, Butow PN, van Weert JC. The characteristics and effectiveness of question prompt list interventions in oncology: a systematic review of the literature. Psychooncology 2015;24:245–52.
[11] Jull J, Kopke S, Smith M, Carley M, Finderup J, Rahn AC, et al. Decision coaching for people making healthcare decisions. Cochrane Database Syst Rev 2021;11:CD013385.
[12] Zhao JQ, Jull J, Finderup J, Smith M, Kienlin SM, Rahn AC, et al. Understanding how and under what circumstances decision coaching works for people making healthcare decisions: a realist review. Bmc Med Inf Decis 2022:22.
[13] Dobler CC, West CP, Montori VM. Can shared decision making improve physician well-being and reduce burnout. Cureus 2017;9:e1615.
[14] Elwyn G, Price A, Franco JVA, Gulbrandsen P. The limits of shared decision making. Bmj Evid-Based Med 2022.
[15] Van der Horst DEMG MM, Bos WJW, Stiggelbout AM, Pieterse AH. For which decisions is shared decision making considered appropriate? - a systematic review. Patient Educ Couns 2023;106:3–16.
[16] Driever EM, Stiggelbout AM, Brand PLP. Do consultants do what they say they do? observational study of the extent to which clinicians involve their patients in the decision-making process. Bmj Open 2022:12.
[17] Alsulamy N, Lee A, Thokala P, Alessa T. What Influences the Implementation of shared decision making: an umbrella review. Patient Educ Couns 2020;103:2400–7.
[18] Brom L, De Snoo-Trimp JC, Onwuteaka-Philipsen BD, Widdershoven GA, Stiggelbout AM, Pasman HR. Challenges in shared decision making in advanced cancer care: a qualitative longitudinal observational and interview study. Health Expect 2017;20:69–84.

[19] Waddell A, Lennox A, Spassova G, Bragge P. Barriers and facilitators to shared decision-making in hospitals from policy to practice: a systematic review. Implement Sci 2021;16:74.
[20] Joseph-Williams N, Elwyn G, Edwards A. Knowledge is not power for patients: a systematic review and thematic synthesis of patient-reported barriers and facilitators to shared decision making. Patient Educ Couns 2014;94:291–309.
[21] Scholl I, LaRussa A, Hahlweg P, Kobrin S, Elwyn G. Organizational- and system-level characteristics that influence implementation of shared decision-making and strategies to address them - a scoping review. Implement Sci 2018:13.
[22] Menichetti J, Lie HC, Mellblom AV, Brembo EA, Eide H, Gulbrandsen P, et al. Tested communication strategies for providing information to patients in medical consultations: a scoping review and quality assessment of the literature. Patient Educ Couns 2021;104:1891–903.
[23] Bomhof-Roordink H, Gärtner FR, Stiggelbout AM, Pieterse AH. Key components of shared decision making models: a systematic review. BMJ Open 2019;9: e031763.
[24] Kunneman M, Gionfriddo MR, Toloza FJK, Gärtner FR, Spencer-Bonilla G, Hargraves IG, et al. Humanistic communication in the evaluation of shared decision making: a systematic review. Patient Educ Couns 2019;102:452–66.
[25] Ubel PA, Scherr KA, Fagerlin A. Empowerment failure: how shortcomings in physician communication unwittingly undermine patient autonomy. Am J Bioeth 2017;17:31–9.
[26] Frank JRS, L.; Sherbino, J.. CanMEDS 2015 Physician Competency Framework. Ottawa: Royal College of Physicians and Surgeons of Canada; (2015).
[27] Stephenson A. Mapping uncertainty in medicine: what do you do when you don't know what to do? Educ Prim Care 2016;27:509–10.
[28] Han PK, Klein WM, Arora NK. Varieties of uncertainty in health care: a conceptual taxonomy. Med Decis Mak 2011;31:828–38.
[29] Benbassat J. Role modeling in medical education: the importance of a reflective imitation. Acad Med 2014;89:550–4.
[30] Reis-Dennis S, Gerrity MS, Geller G. Tolerance for uncertainty and professional development: a normative analysis. J Gen Intern Med 2021;36:2408–13.
[31] Han PKJ, Strout TD, Gutheil C, Germann C, King B, Ofstad E, et al. How physicians manage medical uncertainty: a qualitative study and conceptual taxonomy. Med Decis Mak 2021;41:275–91.
[32] Bogaert B. Untangling fear and eudaimonia in the healthcare provider-patient relationship. Med Health Care Philos 2020;23:457–69.
[33] Larsen BH, Lundeby T, Gerwing J, Gulbrandsen P, Forde R. "Eh-What type of cells are these-flourishing in the liver?" Cancer patients' disclosure of existential concerns in routine hospital consultations. Patient Educ Couns 2022;105: 2019–26.
[34] Strout TD, Hillen M, Gutheil C, Anderson E, Hutchinson R, Ward H, et al. Tolerance of uncertainty: a systematic review of health and healthcare-related outcomes. Patient Educ Couns 2018;101:1518–37.
[35] Geller G, Tambor ES, Chase GA, Holtzman NA. Measuring physicians tolerance for ambiguity and its relationship to their reported practices regarding genetic testing. Med Care 1993;31:989–1001.
[36] Portnoy DB, Han PKJ, Ferrer RA, Klein WMP, Clauser SB. Physicians' attitudes about communicating and managing scientific uncertainty differ by perceived ambiguity aversion of their patients. Health Expect 2011;16:362–72.
[37] Fraenkel L, McGraw S. What are the essential elements to enable patient participation in medical decision making? J Gen Intern Med 2007;22:614–9.
[38] Grim K, Rosenberg D, Svedberg P, Schon UK. Shared decision-making in mental health care-A user perspective on decisional needs in community-based services. Int J Qual Stud Heal 2016:11.
[39] Keij SM, Van Duijn-Bakker N, Stiggelbout AM, Pieterse AH. What makes a patient ready for shared decision making? a qualitative study. Patient Educ Couns 2021; 104:571–7.
[40] Joseph-Williams N, Lloyd A, Edwards A, Stobbart L, Tomson D, Macphail S, et al. Implementing shared decision making in the NHS: lessons from the MAGIC programme. BMJ 2017;357:j1744.
[41] Gill TM. The central role of prognosis in clinical decision making. Jama-J Am Med Assoc 2012;307:199–200.
[42] Sisk BAM JW. How should we enhance the process and purpose of prognostic communication in oncology. AMA J Ethics 2018;20:757–65.
[43] Habib AR, Chen RC, Magnavita ES, Jaung T, Awad MM, Odejide O, et al. Prevalence and tolerance of prognostic uncertainty among thoracic oncologists. Oncologist 2021;26:E1480–2.
[44] Feinberg IO MM, Hendrick RC, Bates K, Johnson K, Wang B. Perception versus reality: the use of teach back by medical residents. Health Lit Res Pract 2019;3: e117–26.
[45] Howard T, Jacobson KL, Kripalani S. Doctor talk: physicians' use of clear verbal communication. J Health Commun 2013;18:991–1001.
[46] Clayman ML, Gulbrandsen P, Morris MA. A patient in the clinic; a person in the world. why shared decision making needs to center on the person rather than the medical encounter. Patient Educ Couns 2017;100:600–4.
[47] Chen CH, Kuo SC, Tang ST. Current status of accurate prognostic awareness in advanced/terminally ill cancer patients: systematic review and meta-regression analysis. Palliat Med 2017;31:406–18.
[48] Reen GK, Silber E, Langdon DW. Multiple sclerosis patients' understanding and preferences for risks and benefits of disease-modifying drugs: a systematic review. J Neurol Sci 2017;375:107–22.
[49] Landmark AMD, Gulbrandsen P, Svennevig J. Whose decision? negotiating epistemic and deontic rights in medical treatment decisions. J Pragmat 2015;78: 54–69.
[50] Landmark AMD, Svennevig J, Gulbrandsen P. Negotiating treatment preferences: physicians' formulations of patients' stance. Soc Sci Med 2016;149:26–36.
[51] Lie HC, Juvet LK, Street Jr RL, Gulbrandsen P, Mellblom AV, Brembo EA, et al. Effects of physicians' information giving on patient outcomes: a systematic review. J Gen Intern Med 2022;37:651–63.
[52] Kannan S, Seo J, Riggs KR, Geller G, Boss EF, Berger ZD. Surgeons' views on shared decision-making. J Patient-Cent Res 2020;7:8–18.
[53] Engelhardt EG, Pieterse AH, van der Hout A, de Haes HJCJM, Kroep JR, van Ufford-Mannesse PQ, et al. Use of implicit persuasion in decision making about adjuvant cancer treatment: a potential barrier to shared decision making. Eur J Cancer 2016;66:55–66.
[54] Van Dulmen S, Peereboom E, Schulze L, Prantl K, Rookmaaker M, Van Jaarsveld BC, et al. The use of implicit persuasion in decision-making about treatment for end-stage kidney disease. Perito Dial Int 2022;42:377–86.
[55] Van de Water LF, Van Kleef JJ, Dijksterhuis WPM, Henselmans I, Van den Boorn HG, Morel NMV, et al. Communicating treatment risks and benefits to cancer patients: a systematic review of communication methods. Qual Life Res 2020;29:1747–66.
[56] Zipkin DA, Umscheid CA, Keating NL, Allen E, Aung K, Beyth R, et al. Evidence-based risk communication: a systematic review. Ann Intern Med 2014;161: 270–80.
[57] Kahneman D. Thinking, fast and slow: Clays Ltd, St Yves plc; (2011).
[58] Pollak KI, Arnold RM, Jeffreys AS, Alexander SC, Olsen MK, Abernethy AP, et al. Oncologist communication about emotion during visits with patients with advanced cancer. J Clin Oncol 2007;25:5748–52.
[59] Van den Brink-Muinen A, Van Dulmen SM, de Haes HCJM, Visser AP, Schellevis FG, Bensing JM. Has patients' involvement in the decision-making process changed over time. Health Expect 2006;9:333–42.
[60] Peters E, Diefenbach MA, Hess TM, Vastfjall D. Age differences in dual information-processing modes implications for cancer decision making. Cancer-Am Cancer Soc 2008;113:3556–67.
[61] Prouty CD, Mazor KM, Greene SM, Roblin DW, Firneno CL, Lemay CA, et al. Providers' perceptions of communication breakdowns in cancer care. J Gen Intern Med 2014;29:1122–30.
[62] Ekdahl AW, Andersson L, Friedrichsen M. "They do what they think is the best for me." frail elderly patients' preferences for participation in their care during hospitalization. Patient Educ Couns 2010;80:233–40.
[63] Rake EA, Box ICH, Dreesens D, Meinders MJ, Kremer JAM, Aarts JWM, et al. Bringing personal perspective elicitation to the heart of shared decision-making: a scoping review br. Patient Educ Couns 2022;105:2860–70.
[64] Brandes K, Linn AJ, Smit EG, van Weert JCM. Patients' reports of barriers to expressing concerns during cancer consultations. Patient Educ Couns 2015;98: 317–22.
[65] Simon D, Krawczyk DC, Bleicher A, Holyoak KJ. The transience of constructed preferences. J Behav Decis Mak 2008;21:1–14.
[66] Luce MF, Payne JW, Bettman JR. Emotional trade-off difficulty and choice. J Mark Res 1999;36:143–59.
[67] Shaw D, Elger B. Evidence-based persuasion an ethical imperative. JAMA 2013; 309:1689–90.
[68] Carrotte ER, Hartup ME, Lee-Bates B, Blanchard M. "I think that everybody should be involved": what informs experiences of shared decision-making in supporting people living with schizophrenia spectrum disorders. Patient Educ Couns 2021; 104:1583–90.
[69] Moleman M, Regeer BJ, Schuitmaker-Warnaar TJ. Shared decision-making and the nuances of clinical work: concepts barriers and opportunities for a dynamic model. J Eval Clin Pr 2021;27:926–34.
[70] Grim KT M, Schön U-K, Rosenberg D. The legitimacy of user knowledge in decision-making processes in mental health care: an analysis of *Epistemic Injustice*. J Psychosoc Rehabil Ment Health 2019;6:157–73.
[71] Entwistle VA, Carter SM, Cribb A, McCaffery K. Supporting patient autonomy: the importance of clinician-patient relationships. J Gen Intern Med 2010;25:741–5.
[72] Scherr KA, Fagerlin A, Hofer T, Scherer LD, Holmes-Rovner M, Williamson LD, et al. Physician recommendations trump patient preferences in prostate cancer treatment decisions. Med Decis Mak 2017;37:56–69.
[73] Mulley AG, Trimble C, Elwyn G. Stop the silent misdiagnosis: patients' preferences matter. BMJ 2012:345.
[74] Gurmankin AD, Baron J, Hershey JC, Ubel PA. The role of physicians' recommendations in medical treatment decisions. Med Decis Mak 2002;22: 262–71.
[75] Mendel R, Traut-Mattausch E, Frey D, Buhner M, Berthele A, Kissling W, et al. Do physicians' recommendations pull patients away from their preferred treatment options. Health Expect 2012;15:23–31.
[76] Peterson C, Seligman ME. Character strengths and virtues: A handbook and classification. Oxford University Press,; 2004. p. 2004.
[77] Simpson M, Buckman R, Stewart M, Maguire P, Lipkin M, Novack D, et al. Doctor-patient communication - the toronto consensus statement. Brit Med J 1991;303: 1385–7.
[78] Niemiec RM, Pearce R. The practice of character strengths: unifying definitions principles and exploration of what's soaring emerging and ripe with potential in science and in practice. Front Psychol 2021:11.
[79] Mahant S, Jovcevska V, Wadhwa A. The nature of excellent clinicians at an academic health science center: a qualitative study. Acad Med 2012;87:1715–21.
[80] Wadhwa A, Mahant S. Humility in medical practice: a qualitative study of peer-nominated excellent clinicians. Bmc Med Educ 2022:22.
[81] Chochinov HM. Humility and the practice of medicine: tasting humble pie. Can Med Assoc J 2010;182:1217–8.

[82] Martin MM, Rubin RB. A new measure of cognitive flexibility. Psychol Rep 1995; 76:623–6.
[83] Houser MM, Worzella G, Burchsted S, Marquez C, Domack T, Acevedo Y. Wellness skills for medical learners and teachers: perspective taking and cognitive flexibility. MedEdPORTAL 2018;14:10674.
[84] Quick O. Duties of candour in healthcare: the truth, the whole truth, and nothing but the truth. Med Law Rev 2022;30:324–47.
[85] Muijs DB C. Metacognition and Self-Regulation: Evidence Review. London: Education Endowment Foundation,; 2020.
[86] Berlyne DE. A theory of human curiosity. Br J Psychol 1954;45:180–91.
[87] Adashi EY, Ahmed AKH, Gruppuso PA. The importance of being curious. Am J Med 2019;132:673–4.
[88] Burke AE, Benson B, Englander R, Carraccio C, Hicks PJ. Domain of competence: practice-based learning and improvement. Acad Pedia 2014;14:S38–54.
[89] Colleges AoAM. Behavioral and Social Science Foundations for Future Physicians: Report of the Behavioral and Social Science Expert Panel. (2011) November 2011.
[90] Rabinowitz D, Reis S, Van Raalte R, Alroy G, Ber R. Development of a physician attributes database as a resource for medical education professionalism and student evaluation. Med Teach 2004;26:160–5.
[91] Education ACfGM. Common Program Requirements (Residency) (2018) [Available from: ⟨https://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/CPRResidency2019-TCC.pdf⟩.
[92] Goetz JL, Keltner D, Simon-Thomas E. Compassion: an evolutionary analysis and empirical review. Psychol Bull 2010;136:351–74.
[93] Gulbrandsen P. A matter of the heart. Patient Educ Couns 2014;96:139–41.
[94] Busari OAW CJ, Halari MM, Halari CD. Motivational factors for aspiring doctors. Am Sci Res J Eng Technol Sci 2016;19:103–12.
[95] Draper C, Louw G. Choosing a career in medicine: the motivations of medical students from the University of Cape Town. Educ Prim Care 2007;18:338–45.
[96] Obadeji AO T, Ntoye N, Oluwole O. Career in medicine: what factors influence medical students. J Conte Med Educ 2014;2:218–21.
[97] Powell A, Boakes J, Slater P. What motivates medical-students - how they see themselves and their profession. Med Educ 1987;21:176–82.
[98] Kötter T, Schulz JC, Pohontsch NJ. Empathy as a selection criterion for medical students: is a valid assessment possible during personal interviews a mixed-methods study. Educ Assess Eval Acc 2022;34:533–52.
[99] Patterson F, Knight A, Dowell J, Nicholson S, Cousans F, Cleland J. How effective are selection methods in medical education. A Syst Rev Med Educ 2016;50:36–60.
[100] Neumann M, Edelhauser F, Tauschel D, Fischer MR, Wirtz M, Woopen C, et al. Empathy decline and its reasons: a systematic review of studies with medical students and residents. Acad Med 2011;86:996–1009.
[101] Coates D, Clerke T. Training interventions to equip health care professionals with shared decision-making skills: a systematic scoping review. J Contin Educ Health 2020;40:100–19.
[102] Feufel MA, Flach JM. Medical education should teach heuristics rather than train them away. Med Educ 2019;53:334–44.
[103] Gheihman G, Johnson M, Simpkin AL. Twelve tips for thriving in the face of clinical uncertainty. Med Teach 2020;42:493–9.
[104] Gulbrandsen P, Gerwing J, Landmark AM. Time to advance the educational model of clinical communication in medicine. Patient Educ Couns 2022;105:1351–2.
[105] Bansal A, Greenley S, Mitchell C, Park S, Shearn K, Reeve J. Optimising planned medical education strategies to develop learners' person-centredness: a realist review. Med Educ 2022;56:489–503.
[106] Rogers DA, Boehler ML, Roberts NK, Johnson V. Using the hidden curriculum to teach professionalism during the surgery clerkship. J Surg Educ 2012;69:423–7.
[107] Hart JT. The inverse care law. Lancet 1971;1:405–12.
[108] Rosen MA, DiazGranados D, Dietz AS, Benishek LE, Thompson D, Pronovost PJ, et al. Teamwork in healthcare: key discoveries enabling safer, high-quality care. Am Psychol 2018;73:433–50.
[109] Sinsky C, Colligan L, Li L, Prgomet M, Reynolds S, Goeders L, et al. Allocation of physician time in ambulatory practice: a time and motion study in 4 specialties. Ann Intern Med 2016;165:753–60.
[110] Driever EM, Stiggelbout AM, Brand PLP. Shared decision making: physicians' preferred role, usual role and their perception of its key components. Patient Educ Couns 2020;103:77–82.
[111] Veenendaal HV, Chernova G, Bouman CM, Etten-Jamaludin FSV, Dieren SV, Ubbink DT. Shared decision-making and the duration of medical consultations: a systematic review and meta-analysis. Patient Educ Couns 2023;107:107561.
[112] Thorne SE, Hislop TG, Stajduhar K, Oglov V. Time-related communication skills from the cancer patient perspective. Psycho-Oncol 2009;18:500–7.
[113] Street Jr RL. The ecology of shared decision-making: the simple and the complex. Patient Educ Couns 2023;112:10776.